



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: PELLENC, Roger

SERIAL NO.: 10/500,650

ART UNIT: 3671

FILED: July 1, 2004

EXAMINER: Kovacs, A.F.

TITLE: LEAF STRIPPER, MORE PARTICULARLY DESIGNED FOR SELECTIVE VINE
LEAF STRIPPING

Supplemental Amendment A: CLAIM AMENDMENTS

Claims 1 - 29 (canceled). These claims are canceled in the present amendment.

30. (new) An apparatus for selective leaf stripping of a vine, the apparatus comprising:

at least one stripping head having a drum, said drum having a cylindrical side wall;

a means for rotating said drum about a generally vertical axis, said means for rotating
cooperative with the stripping head;

an aspirating means positioned on the stripping head for flowing air through said
cylindrical side wall of said drum;

a channeling means cooperative with said drum for channeling the air flow through
a varying portion of said side wall of said drum; and

a cutting means positioned adjacent to said side wall of said drum, said cutting means
for stripping leaves, said cutting means extending in generally parallel relation to said vertical axis
about which said drum rotates, said cylindrical side wall being formed of a flexible and deformable
material that is permeable so as to allow the air flow to pass therethrough.

31. (new) The apparatus of Claim 30, said flexible and deformable material of said
cylindrical side wall being of a metallic fabric material.

32. (new) The apparatus of Claim 30, further comprising:

a vehicle having the stripping head thereon, said vehicle having a speed of movement during operation, said drum being rotated by said means for rotating so as to have a tangential rotational speed at least equal to said speed of movement.

33. (new) The apparatus of Claim 30, said drum having a circular upper end and a circular lower end, said cylindrical side wall being affixed to said upper and lower ends.

34. (new) The apparatus of Claim 33, said circular upper end suspending said cylindrical side wall therefrom.

35. (new) The apparatus of Claim 30, further comprising:

a tensioning means connected to said cylindrical side wall for tensioning said side wall vertically.

36. (new) The apparatus of Claim 35, said drum having a lower axle of rotation, said tensioning means comprising:

a spring extending around said lower axle of rotation so as to act in compression against a lower part of said drum.

37. (new) The apparatus of Claim 30, further comprising:

a leaf pulling means arranged parallel to said vertical axis, said leaf pulling means for pulling on leaves passing thereinto, said leaf pulling means positioned adjacent to said cutting means.

38. (new) The apparatus of Claim 37, said leaf pulling means comprising a rotating feeder coupled to a rotating guide.

39. (new) The apparatus of Claim 37, said leaf pulling means positioned adjacent to said cylindrical side wall of said drum.

40. (new) The apparatus of Claim 38, said rotating feeder comprising:
- an axle having flexible vertical blades affixed thereto and extending therefrom.
41. (new) The apparatus of Claim 38, said rotating feeder comprising a brush.
42. (new) The apparatus of Claim 38, said drum rotated at a tangential speed, said rotating feeder having a tangential speed at least equal to the tangential speed of said drum.
43. (new) The apparatus of Claim 30, further comprising:
- a comb arranged in parallel to and in front of said cutting means.
44. (new) The apparatus of Claim 30, said cutting means positioned behind a diametrical plane of said drum and oriented perpendicular to a desired movement axis of the stripping head.
45. (new) The apparatus of Claim 30, said channeling means comprising a plurality of vertical portions defining an aspirating opening for said means for aspirating, said plurality of vertical portions positioned adjacent an internal surface of said cylindrical side wall of said drum, said plurality of vertical portions being formed of a flexible impermeable material.
46. (new) The apparatus of Claim 45, said channeling means comprising an impermeable cloth affixed over said plurality of vertical portions.
47. (new) The apparatus of Claim 30, said cutting means comprising a vertical cutting bar oriented at a 45° angle with a radius of said drum extending to a cutting edge of said cutting bar.
48. (new) The apparatus of Claim 30, said means for rotating comprising:
- a vertical roller motor positioned outside said drum; and
- at least one vertical counter-contact roller positioned within said drum, said cylindrical side wall of said drum being pinched between said vertical roller motor and the counter-contact roller.

49. (new) The apparatus of Claim 30, said means for rotating comprising:
- a vertical roller motor positioned outside said drum; and
 - a pair of counter-contact rollers having parallel axes, said pair of counter-contact rollers positioned within said drum and pivotable around a vertical axle, said cylindrical side wall of said drum being pinched between said vertical roller motor and said pair of counter-contact roller.
50. (new) The apparatus of Claim 48, said means for rotating further comprising:
- a common motor drivingly connected to said drum.
51. (new) The apparatus of Claim 50, said common motor being a hydraulic motor drivingly connected to a eccentric having a connecting rod coupled to an upper end of said cutting means.
52. (new) The apparatus of Claim 48, said at least one counter-contact roller being urged by an elastic pushing mechanism so as to be maintained under pressure against an internal surface of said cylindrical side wall.
53. (new) The apparatus of Claim 30, the stripping head being suspended on a carrier chassis which is movable along a movement axis, the apparatus further comprising:
- a servo controlling means cooperative with said carrier chassis for moving said stripping head along said movement axis as a function of deformations of said cylindrical side wall.
54. (new) The apparatus of Claim 53, said servo controlling means comprising:
- a means for detecting the deformations housed within said drum.
55. (new) The apparatus of Claim 54, said means for detecting comprising:
- at least one sensor housed within said drum adjacent said cylindrical side wall.

56. (new) The apparatus of Claim 55, said at least one sensor comprising:

a plurality of sensors positioned in vertical alignment and spaced from each other within said drum.

57. (new) The apparatus of Claim 55, said at least one sensor comprising a contact shaft in contact with said cylindrical side wall.

58. (new) The apparatus of Claim 53, said servo controlling means comprising:

an electrical jack having an electronic board suitable for servo control by using an algorithm to determine successive deformations of said cylindrical side wall of said drum, said servo controlling means for acting on a deformable parallelogram on which the stripping head is suspended so as to set an optimum position of said drum.